REMARKS / ARGUMENTS:

The specification (paragraph [00029]) and claim 37 have been amended to correct the spelling of sulfosuccinate that was misspelled due to typographical error.

Claim 37 has also been amended to correct dependency.

Claims 1 – 40 remain in the case.

No new matter has been added.

Rejection of claims 1, 2, 12 - 24, 30, 32, 34 - 36 and 38 - 40 under 35 USC §102(b) as anticipated by U.S. Patent No. 5,849,320 to Turnblad *et al.*

It is respectfully requested that the rejection of claims 1, 2, 12 - 24, 30, 32, 34 - 36 and 38 - 40 under 35 USC §102(b) as anticipated by U.S. Patent No. 5,849,320 to Turnblad *et al.* be reconsidered in view of the reasons described below and be withdrawn.

The present invention focuses on a method to coat a seed that has been treated with an agricultural active with a polymer film that has an advantage of not dispersing the active throughout the polymer film (see page 6, lines 1 – 6 of the specification). This is accomplished by a combination of features that are described in claim 1. The present method comprises providing a seed that has been treated with an agricultural active ingredient, applying to the treated seed a film comprising an emulsion of a polymer in a liquid in which both the agricultural active ingredient and the polymer have low levels of solubility, and curing the film to form a water insoluble polymer coating on the surface of the treated seed.

The Turnblad *et al.* patent teaches an insecticidal seed coating comprising two main components: a binder and an insecticide (see col. 2, lines 47, 48). The binder serves as a matrix for the insecticide (see col. 2, lines 48, 49). In addition, the patent teaches that a film overcoating can be applied to the treated seed (see col. 1, lines 57, 58). The overcoating, or "enveloping" feature is described by Turnblad *et al.* at col. 6, lines 16 – 59, and in Example 2. Since the polymer in Example 2 is Methocel K100M in solution in water, that illustration cannot teach the requirement of the present claims that the overcoating be an emulsion of a polymer in a liquid in which it has low solubility.

Therefore, the teaching of this feature must be found in that section of the specification at column 6. The Applicant respectfully maintains that it is not.

The position of the Office appears to be that the Turnblad *et al.* patent teaches a method comprising providing a seed that had been treated with an active (imidacloprid), applying to that seed a film (overcoating) comprising a polymer (polyvinylpyrrolidone) in a liquid (paraffin oil) in which both the active and the polymer have low levels of solubility, forming an emulsion by adding water (with the motivation being to extend the overcoating solution by dilution), and curing the film to form a water insoluble polymer on the surface of the treated seed.

In the Office Action of January 13, 2004, the Office maintained the rejection and reasserted its argument that Turnblad *et al.* identifies polyvinylpyrrolidone as a polymer in a film-forming composition for enveloping coated seeds, which can be paraffin oil mixed with water soluble ingredients, for example, water soluble polysaccharides. The Office then argued that "the water and paraffin oil ... would form an emulsion", and states that polyvinylpyrrolidone is known to have low solubility in mineral oil. In addition, the Office argues that imidacloprid has low solubility in a water oil mixture.

The Applicant maintains that the claimed features are not taught or suggested in Turnblad *et al.* Although the Office has pointed to terms and materials within the Turnblad *et al.* specification that are also used in the present method, the patent does not teach or suggest the elements of the claimed method. For example, the Office appears to argue that when polyvinylpyrrolidone is the polymer of the coating, and imidacloprid is the active with which the seed has been treated, the polyvinylpyrrolidone has a low solubility in mineral oil. Thus, it appears that the Office is arguing that mineral oil is the liquid in which the polymer is emulsified. However, in order to form an emulsion (as required in the present claim), the Office finds it necessary to add water to the composition in order to "extend" the overcoating by "diluting" with water.

The Applicant respectfully maintains that such a construction of Turnblad *et al.* is tortured and without basis, firstly because Turnblad *et al.* does not appear to teach that the overcoating material is a polymer (polyvinylpyrrolidone) emulsion, secondly because Turnblad *et al.* fails to teach water as an emulsifying liquid for the polyvinylpyrrolidone (mineral oil is cited), and thirdly because the Office has not provided a prior art source

that would motivate a skilled practitioner to add water to an organic liquid in order to "extend" or "dilute" the organic liquid, as the Office has suggested.

Furthermore, if the overcoating film comprises polyvinylpyrrolidone in mineral oil, as the Office suggests, it is not clear how such a composition would be "cured" to form a water insoluble coating, as required in the claim. In order to remove mineral oil by evaporation (drying), as the Office has suggested, it would appear to be necessary to heat the seed to a temperature far hotter than it could tolerate. And no other method of "curing" is proposed by the Office.

It is respectfully maintained, therefore, that the Turnblad *et al.* reference does not teach or suggest each and every feature of the present claims, and, therefore, cannot be found to anticipate the claims. Accordingly, it is respectfully requested that the rejection be reconsidered and be withdrawn.

Rejection of claims 3 - 6 and 37 under 35 USC §103(a) as being obvious over U.S. Patent No. 5,849,320 to Turnblad *et al.* in view of GB 2 110 518 A to Tunde *et al.*

It is respectfully requested that the rejection of claims 3 - 6 and 37 under 35 USC §103(a) as being obvious over U.S. Patent No. 5,849,320 to Turnblad *et al.* in view of GB 2 110 518 A to Tunde *et al.* be reconsidered in view of the reasons described below and be withdrawn.

In the Action of January 13, 2004, the Office stated that the Tunde *et al.* publication was cited to disclose the concentration of material in the overcoating.

In response, Applicant respectfully reasserts its position that Turnblad *et al.* do not teach or suggest the claimed feature of "applying to the treated seed a film comprising an emulsion of a polymer in a liquid in which both the agricultural active ingredient and the polymer have low levels of solubility", as discussed above, and that the Tunde *et al.* reference did not add this teaching. In Examples 6, 9 and 11, of Tunde *et al.*, the only examples that show seed treatment, none of the formulations or methods appear to shown the presently claimed compositions or methods. The coating compositions of Examples 6 and 9 are applied to maize and beet seeds that have not been previously treated with an active, as is required in claims 3 – 6 and 37. Likewise, in Example 11, the coating compositions appear to be applied to peas, beans and maize seeds that

have not been treated with an active. Rather, an active, if one is used, is present in the coating compositions.

Rejection of claim 7 under 35 USC §103(a) as being obvious over U.S. Patent No. 5,849,320 to Turnblad *et al.* in view of GB 2 110 518 A to Tunde *et al.* and further in view of Luvitec advertisement.

It is respectfully requested that the rejection of claim 7 under 35 USC §103(a) as being obvious over U.S. Patent No. 5,849,320 to Turnblad *et al.* in view of GB 2 110 518 A to Tunde *et al.* and further in view of Luvitec advertisement be reconsidered in view of the reasons described below and be withdrawn.

Claim 7 ultimately depends from claim 1, and further describes coatings in which selection of the glass transition temperature of the polymer coating is used to control the release rate of the agricultural active.

The Office has argued that the Livutec advertisement for polyvinylpyrrolidone (PVP) discloses known glass transition temperatures for various PVP grades, and that it would have been obvious to use PVP having a known glass transition temperature depending upon available sources of PVP.

Applicant respectfully reasserts its position that the Livutec advertisement does add the teachings that are missing from Turnblad *et al.*, as discussed above. Moreover, it is maintained that the Livutec advertisement, alone or in combination with Turnblad *et al.*, does not teach or suggest that selection of the glass transition temperature of the polymer coating can be used to control the release rate of the agricultural active, as described in claim 7.

Accordingly, it is respectfully requested that the present rejection be reconsidered and be withdrawn.

Rejection of claims 25 - 29, 31 and 33 under 35 USC §103(a) as being obvious over U.S. Patent No. 5,849,320 to Turnblad *et al.*

The request that was asserted in the Response dated March 10, 2003, that the rejection of claims 25 - 29, 31 and 33 under 35 USC §103(a) as being obvious over U.S.

Patent No. 5,849,320 to Turnblad *et al.* be reconsidered in view of the reasons described below and be withdrawn, is respectfully reasserted in view of the reasons discussed above.

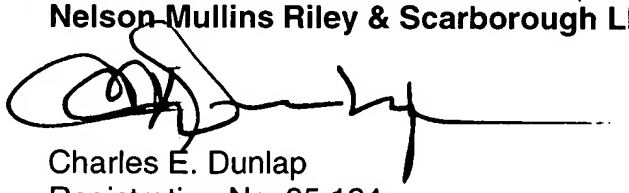
Notice regarding the allowability of claims 8 – 11 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The notice regarding the allowability of claims 8 – 11 if rewritten in independent form including all of the limitations of the base claim and any intervening claims is noted with appreciation.

Request for reconsideration:

It is respectfully requested that the claims be reconsidered after consideration of the reasons for allowability that are discussed above and be found to be allowable. If one or more of the claims are found to not be allowable, a telephone call to the undersigned would be appreciated in order to resolve any remaining issues.

Respectfully submitted,
Nelson Mullins Riley & Scarborough LLP



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